

City of Newport Beach
Buck Gully Runoff Reduction Program
March 6, 2007

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STATE WATER RESOURCES
CONTROL BOARD
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Submitted by:
City of Newport Beach
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Over the past year, the City has conducted a number of investigations to identify likely sources of dry-weather flows in Buck Gully and other canyons in Newport Coast. Preliminary results indicate that canyon runoff is due to excessive irrigation which flows directly to the canyons or infiltrates into the surface and subsequently exfiltrates into the canyon creeks. The City believes the most effective way to reduce the excessive irrigation is by promoting the use of weather-based irrigation controllers and fixing faulty irrigation systems. The City believes the best way to promote this program is through regular meetings among City staff, IRWD, the Irvine Company, golf course management, the boards of Community Associations, management companies, and the landscape maintenance companies that work for the City and area HOAs. This central focus will be supplemented by:

- Source identification and runoff monitoring
- Water usage monitoring
- Meetings with landscapers, garden suppliers and landscape architects
- Community newsletters
- City ordinance on irrigation and landscaping
- Building Permit requirements
- Tiered water rates
- Inspection and enforcement

Any new program that involves cooperation between multiple City departments, outside agencies and the community needs some time to find the common ground and to gain momentum. The underlying strategy is find ways to move forward and work toward gaining acceptance by all parties.

Source Identification

The Newport Coast Flow and Water Quality Assessment prepared by Weston Solutions (2006) found that most of the flow in Buck Gully is due to exfiltration of groundwater into the creek. The report did note significant surface flows emanating from the Pelican Hill Community Association.

The Newport Seepage Study prepared by Todd Engineers (2006) confirmed that groundwater storage has dramatically increased with urban development in the Newport Coast and adjacent properties causing a mounding of groundwater which exfiltrates into the canyons.

Weather Based Evapo-transpiration Controllers

The City conducted a successful pilot program from December 2005 to March 2006 that offered 'smart', weather-based irrigation controllers and installation free

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to residents in high irrigation runoff areas. The entire pilot funding was quickly used as residents called with great interest to participate. Some 70 homes were retrofit with smart controllers tested specifically to reduce urban runoff. At the same time, many property owners repaired irrigation systems. The residential program also stimulated a number of Community Associations to install smart controllers in common areas and upgrade irrigation systems. Initial monitoring indicates that water usage for these properties is dropping.

Over the next 30 months, the City intends to work with IRWD to install another 400-500 controllers in the Newport Coast Area, especially for those properties that drain to Buck Gully. Additionally, the City will sponsor a program for property owners to install water-efficient MP rotator nozzles on irrigation systems. City staff will meet with community associations to discuss the program and will hire a consultant to facilitate the installation of the controllers.

Meetings with Landscapers, Garden Suppliers and Landscape Architects

Staff will hold information meetings with landscapers, landscaping maintenance companies, and HOA property management companies to discuss the use of smart irrigation controllers. The meetings will serve as a forum to discuss landscaper concerns or problems.

Staff will meet with garden suppliers and look for ways to encourage suppliers to stock colorful and water thrifty plants (e.g. using City-sponsored specials).

Staff will host a meeting with local landscape architects to discuss how water saving features can be designed into gardens and landscapes.

Monitoring

The City will adjust its monitoring program to more closely identify sources in Buck Gully and Morning Canyon to help target staff time toward eliminating these sources. The monitoring program will also help the City document reductions in runoff as irrigation controllers are installed.

The City has approved a contract to install three flow meters including a flow meter at a Pelican Hill storm drain that outlets to Buck Gully. Flow meters will continuously measure surface runoff for the next 4 months.

The City and IRWD are coordinating to share water usage records to track monthly water usage.

The City will consider a new position in its Code and Water Quality Enforcement Division to promote water conservation and look for evidence of overwatering in City landscaped areas, HOA common areas and private property.

As part of the ASBS Protection Planning Program, the City will continue to measure flows at the mouth of Buck Gully and Morning Canyon.

Education

Evidence of over water usage will be used to help target an education program advising property owners on the need and benefits of conserving irrigation water. The program will give examples of landscaping practices to minimize water runoff into the canyons.

Staff will contribute articles on runoff reduction to community association newsletters. Additionally, the City will send out informational newsletters to Newport Coast residents, property management companies, and landscaping maintenance firms advising on operation and maintenance of irrigation controllers, monitoring overall water usage, inviting property owners to specialty events at Roger's gardens, tips on landscaping and providing information on canyon water quality.

Water usage maps will be posted on the City web site and then periodically updated to show how progress is being made to reduce water.

The City will look toward rewarding "5-Star" behavior by finding gardens and technologies (like homes with permeable pavers, etc) and highlight them in ads in the Daily Pilot, in water bill inserts and on the City's Website.

The City has partnered with Roger's Garden for creating a model landscape garden with state of the art irrigation systems. The City will help fund construction of an information kiosk and other education signage.

The City will kickoff a "certification" program for businesses that embrace the City's goals for water conservation and run-off reduction through the use of appropriate irrigation systems, water thrifty plants and environmentally friendly pesticides and fertilizers. Business that attend a city training will be recognized (by resolution?) by Council and could use that recognition in advisements.

The City will encourage a competitive spirit by tracking water usage over time for each HOA and posting the information on the City's Website and other local news outlets.

The City's Website will also have features on drought-resistant wildflowers, shrubs and trees as well as recommendations for appropriate plant food, fertilizers and herbicides. The City will coordinate with local nurseries and hardware stores to encourage stocking of appropriate plant materials.

City Ordinances

The City has prepared a draft landscaping and irrigation ordinance for the canyon areas in Newport Coast. A companion User's Manual has also been prepared in draft form. The ordinance and user's manual emphasizes the use of drought tolerant (fire resistive) plant material so that irrigation systems are used less with

less chance of over watering. It is expected that after a 6 to 9 month review period, City Council will adopt the ordinance and user's manual.

Building Permits

The City has modified its Building Permit requirements to require a water quality management plan for new and remodel developments. The water quality management plan requires retention of irrigation water (through the use of infiltration, detention, and French drains) or filtration prior to discharge. Additional permit requirements will be considered including the requirement for more sophisticated irrigation controllers for new development and major remodels.

Tiered Water Usage Rate Structure

The City has begun studying how a tiered water usage rate structure might reward water conservation. It is expected tiered water rates could be in place in three years.

Enforcement

As this program evolves, the Code and Water Quality Enforcement Division will be inspecting the properties for compliance and will initially issue environmental advisory citations. Repeat offenders will be cited and fined.